abcam

Product datasheet

Mouse Clusterin ELISA Kit (Apolipoprotein J) ab199079

Recombinant SimpleStep ELISA

2 References 5 Images

Overview

Product name Mouse Clusterin ELISA Kit (Apolipoprotein J)

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Overall	5			8.2%

Inter-assay

Sample	n	Mean	SD	CV%
Overall	3			12.8%

Sample type Cell culture supernatant, Urine, Serum, Cit plasma

Assay type Sandwich (quantitative)

Sensitivity 280 pg/ml

Range 0.78 ng/ml - 50 ng/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Urine	102	95% - 105%
Serum	105	97% - 112%
Cell culture media	99	95% - 110%
Cit plasma	106	103% - 111%

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Mouse

Does not react with: Sheep, Goat, Cow, Pig

Product overview

Mouse Clusterin ELISA Kit (Apolipoprotein J) (ab199079) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Clusterin (Apolipoprotein J) protein in cell culture supernatant, cit plasma, serum, and urine. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse Clusterin (Apolipoprotein J) with 280 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate (**ab203359**) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

Notes

Clusterin (also known as Apoliprotein J) is a multifunctional protein, named for its ability to induce cellular clustering. The secreted form is processed from a single chain into alpha and beta strands, that form a heterodimeric, 80 kDa protein. Clusterin is also present as an alternatively spliced, 50 kDa intracellular form isoform. As an extracellular chaperone, Clusterin prevents the aggregation of blood plasma proteins and inhibits amyloid fibrils. Clusterin also plays a role in both apoptosis and proliferation. Secreted Clusterin protects against apoptosis by the complement system, but can promote apoptosis when present in the nucleus. Intracellular Clusterin interacts with ubiquitin and the proteasomal machinery for target degradation.

Platform

Microplate (12 x 8 well strips)

Properties

Storage instructions

Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Mouse Clusterin Capture Antibody	1 x 600µl
10X Mouse Clusterin Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 4BI	1 x 6ml
Mouse Clusterin Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml

Components	1 x 96 tests
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

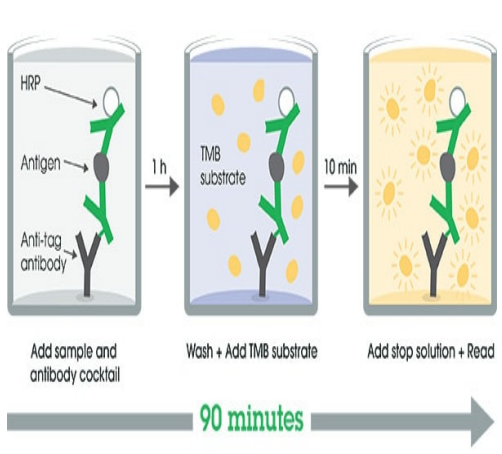
Relevance

Isoform 1 functions as extracellular chaperone that prevents aggregation of nonnative proteins. Prevents stress-induced aggregation of blood plasma proteins. Inhibits formation of amyloid fibrils by APP, APOC2, B2M, CALCA, CSN3, SNCA and aggregation-prone LYZ variants (in vitro). Does not require ATP. Maintains partially unfolded proteins in a state appropriate for subsequent refolding by other chaperones, such as HSPA8/HSC70. Does not refold proteins by itself. Binding to cell surface receptors triggers internalization of the chaperone-client complex and subsequent lysosomal or proteasomal degradation. Secreted isoform 1 protects cells against apoptosis and against cytolysis by complement. Intracellular isoforms interact with ubiquitin and SCF (SKP1-CUL1-F-box protein) E3 ubiquitin-protein ligase complexes and promote the ubiquitination and subsequent proteasomal degradation of target proteins. Promotes proteasomal degradation of COMMD1 and IKBKB. Modulates NF-kappa-B transcriptional activity. Nuclear isoforms promote apoptosis. Mitochondrial isoforms suppress BAX-dependent release of cytochrome c into the cytoplasm and inhibit apoptosis. Plays a role in the regulation of cell proliferation.

Cellular localization

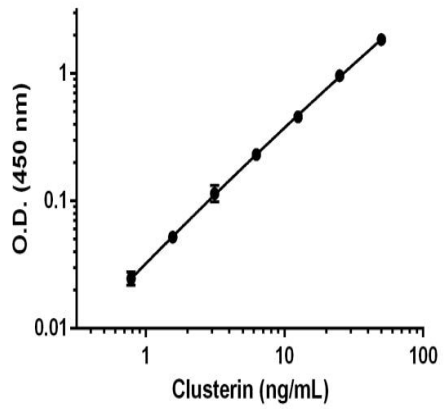
Isoform 1: Secreted. Note: Can retrotranslocate from the secretory compartments to the cytosol upon cellular stress. Nucleus. Cytoplasm. Mitochondrion membrane; Peripheral membrane protein; Cytoplasmic side. Cytoplasm › cytosol. Microsome. Endoplasmic reticulum. Cytoplasmic vesicle › secretory vesicle › chromaffin granule. Note: Isoforms lacking the N-terminal signal sequence have been shown to be cytoplasmic and/or nuclear. Secreted isoforms can retrotranslocate from the secretory compartments to the cytosol upon cellular stress. Detected in perinuclear foci that may be aggresomes containing misfolded, ubiquitinated proteins. Detected at the mitochondrion membrane upon induction of apoptosis.

Images



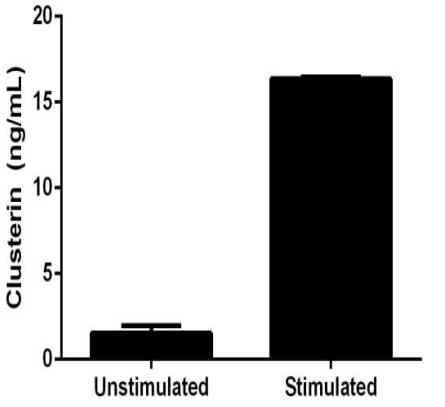
Other - Mouse Clusterin ELISA Kit (Apolipoprotein J) (ab199079)

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



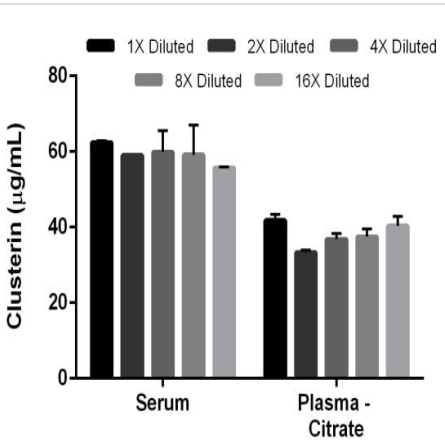
Example of Clusterin standard curve.

Background-subtracted data values (mean +/- SD) are graphed.



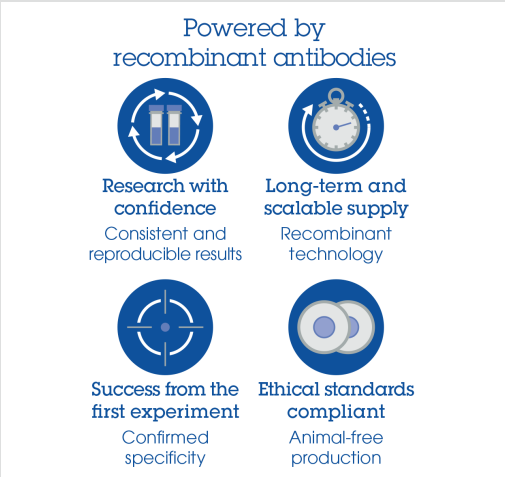
Comparison of secreted Clusterin in unstimulated and PMA/PHA-stimulated L929 Cells.

L929 cells were grown in the absence (unstimulated) or presence of Phorbol Myristate Acetate (PMA) and phytohemagglutinin (PHA) (stimulated) for 3 days. Clusterin was measured in 2-fold diluted cell culture supernatants of unstimulated and PMA/PHA stimulated L929 and cell culture media. Measured values were interpolated from the Clusterin Standard Curve diluted in Sample Diluent NS and corrected for dilution factor. Mean of duplicate values +/-SD are graphed: 1.5 ng/mL unstimulated, 16.4 ng/mL stimulated. There was no detectable signal in media.



Linearity of dilution of the assay.

Interpolated concentrations of Clusterin in mouse serum and plasma (citrate). The concentrations of Clusterin were measured in duplicate and interpolated from the Clusterin standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Clusterin concentration was determined to be 59.1 µg/mL in mouse serum and 38.7 µg /mL in mouse plasma.



Sandwich ELISA - Mouse Clusterin ELISA Kit (Apolipoprotein J) (ab199079)

To learn more about the advantages of recombinant antibodies see **here**.

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